

**Response under 37 C.F.R. § 1.116
Expedited Procedure
Examining Group 3725**

PATENT
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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| In re Application of: |) | |
| Rowan DALLIMORE et al. |) | Confirmation No.: 5012 |
| Application No.: 10/525,978 |) | Group Art Unit: 3725 |
| Filed: July 29, 2005 |) | Examiner: Miller, Bena B. |
| Title: WEAR PART FOR A CRUSHER |) | |

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AMENDMENT UNDER 37 C.F.R. § 1.116

In response to the Final Office Action dated February 3, 2009, the period for response to which extends through May 3, 2009, entry of the following amendment is respectfully requested.

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing Of Claims:

1. (Currently Amended): A distributor plate releasably mounted on a horizontal lower disc of a rotor for a vertical shaft impact crusher, said rotor having an opening for the intake of material to be crushed and at least one outflow opening for material leaving the rotor, wherein a shape of the distributor plate is an equilateral polygon as seen from above, wherein the distributor plate has a lower surface and an upper surface, and wherein the upper surface comprises an unbroken layer.

2. (Previously Presented): The distributor plate according to claim 1, wherein the shape of the distributor plate is selected from the group consisting of triangular, square, hexagonal, octagonal and nonagonal shapes.

3. (Previously Presented): The distributor plate according to claim 1, wherein the number of sides of the polygon being chosen is selected such that the number of sides is 1, 2 or 3 times the number of outflow openings of the rotor to which the distributor plate is mounted.

4. (Previously Presented): The distributor plate according to claim 3, wherein the number of sides is 2 times the number of outflow openings of the rotor.

5. (Previously Presented): The distributor plate according to claim 1, wherein at least one straight side edge of the distributor plate is parallel to an outflow direction of material leaving the rotor and is parallel and adjacent to a face of a lower wear plate protecting the lower disc from wear.

6. (Previously Presented): The distributor plate according to claim 1, wherein the distributor plate at the center of its lower face has a recess to make the distributor plate horizontally turnable around a vertical shaft mounted on the lower disc, such that the position of the distributor plate in relation to the lower disc may be adjusted before mounting the distributor plate.

7. (Previously Presented): The distributor plate according to claim 6, wherein the recess extends only through a part of the thickness of the distributor plate, the upper face of the distributor plate thus being unaffected by said recess.

8. (Previously Presented): The distributor plate according to claim 6, wherein the distributor plate has a lower surface which is located at a higher level than the upper surface of lower wear plates protecting the lower disc of the rotor, such that the distributor plate may be adjusted without removing the lower wear plates.

9. (Previously Presented): The distributor plate according to claim 1, wherein the upper face of the distributor plate comprises an unbroken layer of a hard metal.

10. (Previously Presented): The distributor plate according to claim 1, wherein the distributor plate comprises mounting means located at a vertical side edge of the distributor plate for mounting of a vertical support fixing the distributor plate to the lower disc of the rotor,

11. (Withdrawn – Currently Amended): A rotor for a vertical shaft impact crusher, the rotor having an opening for the intake of material to be crushed, at least one outflow opening for material leaving the rotor, and at least one lower wear plate and a distributor plate releasably mounted on a horizontal lower disc of the rotor, wherein the distributor plate has a shape defined by an equilateral polygon as seen from above, at least one straight side edge of the distributor plate being parallel to an outflow direction of material leaving the rotor and being parallel to and adjacent to a face of the lower wear plate.

12. (Previously Presented): The distributor plate according to claim 9, wherein the upper face of the distributor plate comprises an unbroken layer of tungsten carbide.

13. (Currently Amended): A distributor plate adapted to be releasably mounted on a horizontal lower disc of a rotor of a vertical shaft impact crusher, wherein a shape of the distribution plate is an equilateral polygon as seen from above, wherein the distributor plate has a lower surface and an upper surface, and wherein the upper surface comprises an unbroken layer.

14. (Previously Presented): The distributor plate according to claim 13, wherein the shape of the distributor plate is selected from the group consisting of triangular, square, hexagonal, octagonal, nonagonal, and dodecagonal shapes.

15. (Previously Presented): The distributor plate according to claim 13, further comprising a recess at the center of its lower face adapted to make the distributor plate

horizontally turnable around a vertical shaft mounted on the lower disc, such that the position of the distributor plate in relation to the lower disc may be adjusted before mounting the distributor plate.

16. (Previously Presented): The distributor plate according to claim 15, wherein the recess extends only through a part of the thickness of the distributor plate, and wherein the upper face of the distribution plate is free of the recess.

17. (Previously Presented): The distributor plate according to claim 13, wherein the upper face of the distributor plate comprises an unbroken layer of a hard metal.

18. (Previously Presented): The distributor plate according to claim 13, wherein the upper face of the distributor plate comprises an unbroken layer of tungsten carbide.

19. (Previously Presented): The distributor plate according to claim 13, further comprising mounting means located at a vertical side edge of the distributor plate adapted for the mounting of a vertical support fixing the distributor to the lower disc of the rotor.

20. (Previously Presented): The distributor plate according to claim 19, wherein the mounting means comprises a hole with an inner thread adapted to receive a bolt.

REMARKS

Entry of the foregoing and reconsideration of the subject application are respectfully requested in light of the amendments above and the comments which follow.

Claims 1-20 were pending in this application. In this response, claims 1 and 13 are amended and no claim is canceled or added. Thus, claims 1-20 remain pending.

Support for the foregoing amendments can be found, for example, in at least the following locations in the original disclosure: the original claims and the specification at page 4, lines 35-37.

Entry of this Amendment is proper under 37 C.F.R. § 1.116, because the Amendment places the application in condition for allowance for the reasons discussed herein; does not raise any new issue requiring further search and/or consideration, because the amendments amplify issues previously discussed throughout prosecution; does not present any additional claims; and places the application in better form for an appeal should an appeal be necessary. The Amendment was not earlier presented, because it is made in response to arguments raised in the final rejection. Entry of the Amendment, reexamination and further and favorable reconsideration of the subject application in light of the following remarks, pursuant to and consistent with 37 C.F.R. § 1.116, are thus respectfully requested.

REJECTIONS UNDER 35 U.S.C. § 112

Claims 6, 7, 8 and 12-20 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention on the grounds set forth on page 2 of the Official Action. Applicants amended claims 1 and 13 to add that “the distributor plate has a lower surface and an

upper surface.” This phrase provides antecedent basis for lower surface and upper surface referred to in claims 6-8, 12, 15, and 17.

Applicants traverse the rejection of claim 13. As stated in the previous response dated November 17, 2008, claims 13-20 define only the distributor plate. The Examiner mentions claim 3 as an example of a claim having limitations to the rotor, but this claim is not dependent on claim 13. It is not clear why other claims, especially a claim not dependent on claim 13, would render claim 13 indefinite. Claims 13-20 refer to only structural elements of the distributor plate and not elements of the rotor. The “adapted to” language, for example, “adapted to be releasably mounted on a horizontal lower disc of a rotor of a vertical shaft impact crusher” in claim 13, does not necessarily require that the distributor plate include the described elements of a rotor. The “adapted to” language of claim 13 can merely define the structure of the distributor plate, for example, that the distributor plate of claim 13 has the structure necessary “to be releasably mounted on a horizontal lower disc of a rotor of a vertical shaft impact crusher.”

REJECTIONS UNDER 35 U.S.C. § 102

Claims 1, 3, 5, 6, 8, 10, 13, 15, 19 and 20 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,227,473 to Arnold (hereafter “*Arnold*”) on the grounds set forth at page 3 of the Official Action. Applicant notes that the Office Action says U.S. Patent No. 5,145,279, but this appeared to be a mistake. The Examiner verified the correct U.S. Patent Number over the telephone on April 29, 2009.

Applicants respectfully traverse the rejection. To establish a *prima facie* case of anticipation, a single prior art reference must teach each and every element of the claimed invention, either explicitly or inherently. *Verdegaal Bros. v. Union Oil Co. Cal.*, 814 F.2d 628,

631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Claims 1 and 13 recite that “the upper surface comprises an unbroken layer.” *Arnold* fails to disclose an unbroken upper surface on a distribution plate. In contrast, *Arnold* includes at least a hole in the center of the upper surface in which a rotatable shaft (28) passes through. See, e.g., Figure 3 and 4 and col. 7, ll. 1-15. Therefore, *Arnold* fails to disclose each and every element of the claimed invention, and thus fails to anticipate claims 1 and 13.

Dependent claims 3, 5, 6, 8, 10, 13, 15, 19, and 20, which depend from claims 1 and 13, respectively, are also not anticipated for at least reasons similar to those for claims 1 and 13. Accordingly, Applicants respectfully request withdrawal of the rejection.

Claims 13, 14 and 19 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,145,279 to Larcheron et al. (hereafter “*Larcheron*”) on the grounds set forth at page 4 of the Official Action.

Applicants respectfully traverse the rejection. Claim 13 recites that the distributor plate is “adapted to be releasably mounted on a horizontal lower disc of a rotor of a vertical shaft impact crusher.” The Examiner points to the force transmitter distributor 232 shown in Figure 4 of *Larcheron* as a structure that allegedly anticipates claim 13. However, *Larcheron* at least fails to disclose a distributor plate that is adapted to or, in other words, has the structure that would enable the distributor plate “to be releasably mounted on a horizontal lower disc of a rotor of a vertical shaft impact crusher” as recited in claim 13. Further, *Larcheron* fails to disclose that the upper surface of the distribution plate comprises an unbroken layer as recited in claim 13. For at least these reasons, *Larcheron* fails to teach each and every element of claim 13, and thus fails to anticipate the claim.

Dependent claims 14 and 19, which depend from claim 13, are also not anticipated for at least reasons similar to those for claim 13. Accordingly, Applicants respectfully request withdrawal of the rejection.

REJECTIONS UNDER 35 U.S.C. § 103

Claims 2, 4, 7, 14 and 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Arnold* on the grounds set forth at page 4 of the Official Action.

Applicants respectfully traverse the rejection. For the reasons presented above, *Arnold* fails to disclose that the distributor plate has an upper surface that is an unbroken layer as recited in claims 1 and 13. Applicants further submit that it would not have been obvious to one of ordinary skill in the art to modify *Arnold* to have an upper surface that is an unbroken surface. The apparatus for pulverizing material into small particles of *Arnold* only works if the rotatable shaft 28 passes through and attaches via a hub to each of the rotors inside the housing 12. The rotatable shaft 28 provides the rotational force to the rotors to enable them to rotate, and thus produce the desired strong air flow through housing 12 to pulverize the material into small particles. *See, e.g.*, col. 1, ll. 38-50 and col. 10, ll. 61-67. If the “distribution plate” 148 of *Arnold* was modified to have an unbroken upper surface, then the rotatable shaft 28 could not pass through and connect via a hub to the “distribution plate” 148. Therefore, the rotatable shaft would not be able to provide the desired rotational force to the rotor 90, and thus would render *Arnold* unsatisfactory for its intended purpose. If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no expectation of success in making the proposed modification. *See* MPEP § 2143.01 (V). For at least this reason, no *prima facie* case of obviousness has been established for claims 1 and 13.

Dependent claims 2, 4, 7, 14, and 16, which depend from claims 1 and 13, respectively, are also not obvious for at least reasons similar to those for claims 1 and 13. Accordingly, Applicants respectfully request withdrawal of the rejection.

Claims 9, 12, 17, and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Arnold* in view of U.S. Patent No. 5,037,035 to Garland (hereafter "*Garland*") on the grounds set forth at page 5 of the Official Action.

Applicants respectfully traverse the rejection. *Arnold* teaches away from the upper surface of the distribution plate being an unbroken layer. Any proposed modification to provide the upper surface with an unbroken layer would render *Arnold* unsatisfactory for its intended purpose, for at least the reasons presented above. *Garland* teaches a different type of distribution plate from *Arnold*, and does not provide any evidence that the distribution plate of *Arnold* could be modified as proposed to meet all of the elements of claims 1 and 13, without rendering *Arnold* unsatisfactory for its intended purpose. Thus, *Garland* fails to cure at least this deficiency of *Arnold*. For at least this reason, no *prima facie* case of obviousness has been established for claims 1 and 13.

Dependent claims 9, 12, 17, and 18, which depend from claims 1 and 13, respectively, are also not obvious for at least reasons similar to those for claims 1 and 13. Accordingly, Applicants respectfully request withdrawal of the rejection.

CONCLUSION

From the foregoing, further and favorable action in the form of a Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed and prosecution of the instant application expedited.

Respectfully submitted,

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